



## SEQUENCE LISTING

Panov, Sergey

<120> Nucleic Acids Encoding Linked  
Chromo/Fluorescent Domains and Methods for Using the Same

<130> CLON-094

<140> us 10/806,930

<141> 2004-03-22

<150> 09/976,673

<151> 2001-10-12

<150> 60/356,225

<151> 2002-02-11

<150> 60/383,336

<151> 2002-05-22

<150> PCT/US02/32560

<151> 2002-10-10

<160> 13

<170> FastSEQ for Windows Version 4.0

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&lt;211&gt; 460

&lt;212&gt; PRT

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          20          25          30
Gly Asn Pro Phe Ala Gly Thr Gln Ser Met Arg Ile His Val Thr Glu
          35          40          45
Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu Ala Pro Cys Cys Glu
          50          55          60
Tyr Gly Ser Arg Thr Phe Val His His Thr Ala Glu Ile Pro Asp Phe
65          70          75          80
Phe Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Thr
          85          90          95
Tyr Glu Asp Gly Gly Ile Leu Thr Ala His Gln Asp Thr Ser Leu Glu
          100          105          110
Gly Asn Cys Leu Ile Tyr Lys Val Lys Val Leu Gly Thr Asn Phe Pro
          115          120          125
Ala Asp Gly Pro Val Met Lys Asn Lys Ser Gly Gly Trp Glu Pro Ser
          130          135          140
Thr Glu Val Val Tyr Pro Glu Asn Gly Val Leu Cys Gly Arg Asn Val
          145          150          155          160
Met Ala Leu Lys Val Gly Asp Arg Arg Leu Ile Cys His His Tyr Thr
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Ser Tyr Arg Ser Lys Lys Ala Val Arg Ala Leu Thr Met Pro Gly Phe
          180          185          190
His Phe Thr Asp Ile Arg Leu Gln Met Leu Arg Lys Glu Lys Asp Glu
          195          200          205
Tyr Phe Glu Leu Tyr Glu Ala Ser Val Ala Arg Tyr Ser Asp Leu Pro
          210          215          220
Glu Lys Ala Asn Arg Ser Pro Gly Met Val Ser Gly Leu Leu Lys Glu
          225          230          235          240
Ser Met Arg Ile Lys Met Tyr Met Glu Gly Thr Val Asn Gly His Tyr
          245          250          255
Phe Lys Cys Glu Gly Glu Gly Asp Gly Asn Pro Phe Ala Gly Thr Gln
          260          265          270
Ser Met Arg Ile His Val Thr Glu Gly Ala Pro Leu Pro Phe Ala Phe
          275          280          285
Asp Ile Leu Ala Pro Cys Cys Glu Tyr Gly Ser Arg Thr Phe Val His
          290          295          300
His Thr Ala Glu Ile Pro Asp Phe Phe Lys Gln Ser Phe Pro Glu Gly
          305          310          315          320
Phe Thr Trp Glu Arg Thr Thr Thr Tyr Glu Asp Gly Gly Ile Leu Thr
          325          330          335
Ala His Gln Asp Thr Ser Leu Glu Gly Asn Cys Leu Ile Tyr Lys Val
          340          345          350
Lys Val Leu Gly Thr Asn Phe Pro Ala Asp Gly Pro Val Met Lys Asn
          355          360          365
Lys Ser Gly Gly Trp Glu Pro Ser Thr Glu Val Val Tyr Pro Glu Asn
          370          375          380
Gly Val Leu Cys Gly Arg Asn Val Met Ala Leu Lys Val Gly Asp Arg
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Arg Leu Ile Cys His His Tyr Thr Ser Tyr Arg Ser Lys Lys Ala Val

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Val Ala Arg Tyr Ser Asp Leu Pro Glu Lys Ala Asn					
	450		455		460

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caccaacttc	cccgcgcagc	gccccgtgat	gaagaacaag	agcggcggct	gggagcccag	1140
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<400> 4

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35 40 45	
Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu Ala Pro Cys Cys Glu	
50 55 60	
Tyr Gly Ser Arg Thr Phe Val His His Thr Ala Glu Ile Pro Asp Phe	
65 70 75 80	
Phe Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Thr	
85 90 95	
Tyr Glu Asp Gly Gly Ile Leu Thr Ala His Gln Asp Thr Ser Leu Glu	



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<211> 458

<212> PRT

<213> Anthozoa

<400> 6

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 20             25             30
Asn Pro Phe Ala Gly Thr Gln Ser Met Arg Ile His Val Thr Glu Gly
 35             40             45
Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu Ala Pro Cys Cys Glu Tyr
 50             55             60
Gly Ser Arg Thr Phe Val His His Thr Ala Glu Ile Pro Asp Phe Phe
 65             70             75             80
Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Thr Tyr
 85             90             95
Glu Asp Gly Gly Ile Leu Thr Ala His Gln Asp Thr Ser Leu Glu Gly
100             105             110
Asn Cys Leu Ile Tyr Lys Val Lys Val His Gly Thr Asn Phe Pro Ala
115             120             125
Asp Gly Pro Val Met Lys Asn Lys Ser Gly Gly Trp Glu Pro Ser Thr
130             135             140
Glu Val Val Tyr Pro Glu Asn Gly Val Leu Cys Gly Arg Asn Val Met
145             150             155             160
Ala Leu Lys Val Gly Asp Arg His Leu Ile Cys His His Tyr Thr Ser
165             170             175
Tyr Arg Ser Lys Lys Ala Val Arg Ala Leu Thr Met Pro Gly Phe His
180             185             190
Phe Thr Asp Ile Arg Leu Gln Met Leu Arg Lys Lys Lys Asp Glu Tyr
195             200             205
Phe Glu Leu Tyr Glu Ala Ser Val Ala Arg Tyr Ser Asp Leu Pro Glu
210             215             220
Lys Ala Asn Arg Ser Pro Gly Met Ser Gly Leu Leu Lys Glu Ser Met
225             230             235             240
Arg Ile Lys Met Tyr Met Glu Gly Thr Val Asn Gly His Tyr Phe Lys
245             250             255
Cys Glu Gly Glu Gly Asp Gly Asn Pro Phe Ala Gly Thr Gln Ser Met

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	260		265		270
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290	295	300			
Ala Glu Ile Pro Asp Phe Phe Lys Gln Ser Phe Pro Glu Gly Phe Thr					
305	310	315			320
Trp Glu Arg Thr Thr Thr Tyr Glu Asp Gly Gly Ile Leu Thr Ala His					
	325	330			335
Gln Asp Thr Ser Leu Glu Gly Asn Cys Leu Ile Tyr Lys Val Lys Val					
	340	345			350
His Gly Thr Asn Phe Pro Ala Asp Gly Pro Val Met Lys Asn Lys Ser					
	355	360			365
Gly Gly Trp Glu Pro Ser Thr Glu Val Val Tyr Pro Glu Asn Gly Val					
	370	375			380
Leu Cys Gly Arg Asn Val Met Ala Leu Lys Val Gly Asp Arg His Leu					
385	390	395			400
Ile Cys His His Tyr Thr Ser Tyr Arg Ser Lys Lys Ala Val Arg Ala					
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Leu Thr Met Pro Gly Phe His Phe Thr Asp Ile Arg Leu Gln Met Leu					
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 <213> Anthozoa

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Asn	Pro	Leu	Glu	Gly	Thr	Gln	Glu	Met	Lys	Ile	Glu	Val	Ile	Glu	Gly
		35					40					45			
Gly	Pro	Leu	Pro	Phe	Ala	Phe	His	Ile	Leu	Ser	Thr	Ser	Cys	Met	Tyr
	50					55					60				
Gly	Ser	Lys	Ala	Phe	Ile	Lys	Tyr	Val	Ser	Gly	Ile	Pro	Asp	Tyr	Phe
65					70					75				80	
Lys	Gln	Ser	Leu	Pro	Glu	Gly	Phe	Thr	Trp	Glu	Arg	Thr	Thr	Thr	Tyr
				85					90					95	
Glu	Asp	Gly	Gly	Phe	Leu	Thr	Ala	His	Gln	Asp	Thr	Ser	Leu	Asp	Gly
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Asp	Cys	Leu	Val	Tyr	Lys	Val	Lys	Ile	Leu	Gly	Asn	Asn	Phe	Pro	Ala
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Asp	Gly	Pro	Val	Met	Gln	Asn	Lys	Ala	Gly	Arg	Trp	Glu	Pro	Ser	Thr
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Ala	Leu	Glu	Cys	Pro	Gly	Gly	Arg	His	Leu	Thr	Cys	His	Leu	His	Thr
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Thr	Tyr	Arg	Ser	Lys	Lys	Pro	Ala	Ser	Ala	Leu	Lys	Met	Pro	Gly	Phe
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Pro	Glu	Gly	Phe	Thr	Trp	Glu	Arg	Thr	Thr	Thr	Tyr	Glu	Asp	Gly	Gly
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Phe	Leu	Thr	Ala	His	Gln	Asp	Thr	Ser	Leu	Asp	Gly	Asp	Cys	Leu	Val
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Tyr	Lys	Val	Lys	Ile	Leu	Gly	Asn	Asn	Phe	Pro	Ala	Asp	Gly	Pro	Val
		355					360					365			
Met	Gln	Asn	Lys	Ala	Gly	Arg	Trp	Glu	Pro	Ser	Thr	Glu	Ile	Val	Tyr
	370					375						380			
Glu	Val	Asp	Gly	Val	Leu	Arg	Gly	Gln	Ser	Ser	Met	Ala	Leu	Glu	Cys
385					390					395				400	
Pro	Gly	Gly	Arg	His	Leu	Thr	Cys	His	Leu	His	Thr	Thr	Tyr	Arg	Ser
				405					410					415	
Lys	Lys	Pro	Ala	Ser	Ala	Leu	Lys	Met	Pro	Gly	Phe	His	Phe	Glu	Asp
			420					425					430		

His Arg Ile Glu Ile Leu Glu Glu Val Glu Lys Gly Lys Cys Tyr Lys  
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 Thr Val Asn Gly His Tyr Phe Lys Cys Thr Gly Lys Gly Glu Gly Asn  
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 Pro Leu Glu Gly Thr Gln Glu Met Lys Ile Glu Val Ile Glu Gly Gly  
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 Pro Leu Pro Phe Ala Phe His Ile Leu Ser Thr Ser Cys Met Tyr Gly  
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 Ser Lys Ala Phe Ile Lys Tyr Val Ser Gly Ile Pro Asp Tyr Phe Lys  
 65 70 75 80  
 Gln Ser Leu Pro Glu Gly Phe Thr Trp Glu Arg Thr Thr Thr Tyr Glu  
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 Asp Gly Gly Phe Leu Thr Ala His Gln Asp Thr Ser Leu Asp Gly Asp  
 100 105 110



Cys	Leu	Val	Tyr	Lys	Val	Lys	Ile	Leu	Gly	Asn	Asn	Phe	Pro	Ala	Asp
	115						120					125			
Gly	Pro	Val	Met	Gln	Asn	Lys	Ala	Gly	Arg	Trp	Glu	Pro	Ser	Thr	Glu
	130					135					140				
Ile	Val	Tyr	Glu	Val	Asp	Gly	Val	Leu	Arg	Gly	Gln	Ser	Leu	Met	Ala
145					150					155					160
Leu	Glu	Cys	Pro	Gly	Gly	Arg	His	Leu	Thr	Cys	His	Leu	His	Thr	Thr
				165					170					175	
Tyr	Arg	Ser	Lys	Lys	Pro	Ala	Ser	Ala	Leu	Lys	Met	Pro	Gly	Phe	His
			180					185					190		
Phe	Glu	Asp	His	Arg	Ile	Glu	Ile	Leu	Glu	Glu	Val	Glu	Lys	Gly	Lys
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Cys	Tyr	Lys	Gln	Tyr	Glu	Ala	Ala	Val	Gly	Arg	Tyr	Cys	Asp	Ala	Ala
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Pro	Ser	Lys	Leu	Gly	His	Asn	Arg	Ser	Pro	Gly	Ala	Ser	Leu	Leu	Thr
225					230					235					240
Glu	Thr	Met	Pro	Phe	Arg	Thr	Thr	Ile	Glu	Gly	Thr	Val	Asn	Gly	His
				245					250					255	
Tyr	Phe	Lys	Cys	Thr	Gly	Lys	Gly	Glu	Gly	Asn	Pro	Leu	Glu	Gly	Thr
			260					265					270		
Gln	Glu	Met	Lys	Ile	Glu	Val	Ile	Glu	Gly	Gly	Pro	Leu	Pro	Phe	Ala
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Phe	His	Ile	Leu	Ser	Thr	Ser	Cys	Met	Tyr	Gly	Ser	Lys	Ala	Phe	Ile
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Lys	Tyr	Val	Ser	Gly	Ile	Pro	Asp	Tyr	Phe	Lys	Gln	Ser	Leu	Pro	Glu
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Gly	Phe	Thr	Trp	Glu	Arg	Thr	Thr	Thr	Tyr	Glu	Asp	Gly	Gly	Phe	Leu
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Thr	Ala	His	Gln	Asp	Thr	Ser	Leu	Asp	Gly	Asp	Cys	Leu	Val	Tyr	Lys
			340					345					350		
Val	Lys	Ile	Leu	Gly	Asn	Asn	Phe	Pro	Ala	Asp	Gly	Pro	Val	Met	Gln
		355					360					365			
Asn	Lys	Ala	Gly	Arg	Trp	Glu	Pro	Ser	Thr	Glu	Ile	Val	Tyr	Glu	Val
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Asp	Gly	Val	Leu	Arg	Gly	Gln	Ser	Leu	Met	Ala	Leu	Glu	Cys	Pro	Gly
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Gly	Arg	His	Leu	Thr	Cys	His	Leu	His	Thr	Thr	Tyr	Arg	Ser	Lys	Lys
				405					410					415	
Pro	Ala	Ser	Ala	Leu	Lys	Met	Pro	Gly	Phe	His	Phe	Glu	Asp	His	Arg
			420					425					430		
Ile	Glu	Ile	Leu	Glu	Glu	Val	Glu	Lys	Gly	Lys	Cys	Tyr	Lys	Gln	Tyr
		435					440					445			
Glu	Ala	Ala	Val	Gly	Arg	Tyr	Cys	Asp	Ala	Ala	Pro	Ser	Lys	Leu	Gly
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His	Asn														
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